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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,091	09/17/2002	Fang-Chen Luo	5486-US-PA	4158

31561 7590 12/02/2004

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER	
WANG, GEORGE Y	
ART UNIT	**PAPER NUMBER**
2871	

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/065,091	LUO ET AL.	
	Examiner	Art Unit	
	George Y. Wang	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 24-33* is/are pending in the application.

4a) Of the above claim(s) *24-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 September 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 1-13 in the reply filed on September 9, 2004 is acknowledged. The traversal is on the ground(s) that "the claims are basically different definitions of the same disclosed subject matter, varying in breadth and scope." This is not found persuasive because it is clear that the species vary more than in "breadth and scope." Species 2 is directed to an LCD structure having a plurality of reflectors and species 3 is directed to an LCD structure having reflectors alternatively laid on an exposed organic insulating layer. As a result, a search and examination of these species is exclusive and distinct and would clearly be a burden on the Examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-7, 9-10, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (U.S. Patent No. 5,691,791, hereinafter "Nakamura") in view of Kim et al. (U.S. Patent No. 6,038,008, hereinafter "Kim '008").

4. As to claim 1, Nakamura discloses a liquid crystal display (LCD) device (fig. 27) comprising a first substrate panel (fig. 27, ref. 280), a second substrate panel (fig. 27, ref. 295), and a liquid crystal layer (fig. 27, ref. 299) disposed between the panels, a plurality of pixel portions being formed by respective electrodes (fig. 27, ref. 288, 297) for applying voltage to the liquid crystal layer, each of the pixel portions having an organic insulating layer (fig. 27, ref. 292) over the first substrate panel where the surface of the insulating layer has a plurality of protrude/recess structures, a conformal reflective layer (fig. 27, ref. 288) over the organic insulating layer, a dielectric layer (fig. 27, ref. 294) over the conformal reflective layer where the dielectric layer has a smoother upper surface

However, the reference fails to specifically disclose a first transparent conductive layer over the dielectric layer.

Kim '008 discloses an LCD device having a first transparent conductive layer (fig. 7h, ref. 104) over the dielectric layer (fig. 7h, ref. 126).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a first transparent conductive layer over the dielectric layer since one would be motivated to prevent light leakage that would occur around the border of the pixel electrode as well as improve display contrast (col. 7, lines 35-54).

5. Regarding claims 2-7, Nakamura discloses the LCD as recited above where the first substrate panel (fig. 27, ref. 280) includes a glass panel (fig. 27, ref. 281) and a thin film transistor (TFT) (fig. 27, ref. 290) having gate, source, and drain electrodes, where the organic insulating layer (fig. 27, ref. 292) includes an acrylic photosensitive resin, and where the conformal reflective layer (fig. 27, ref. 288) included aluminum material (col. 7, ref. 51-53).

6. As per claims 9-10 and 12-13, Nakamura discloses the LCD as recited above further having a second substrate panel (fig. 27, ref. 295) that is aligned to the first, a second transparent conductive layer (fig. 27, ref. 297) over the second substrate panel, and a liquid crystal layer (fig. 27, ref. 299) between the conductive layers, the dielectric layer (fig. 27, ref. 294, 298) including a transparent insulating material, and a color filter layer (fig. 27, ref. 296) between the second substrate panel and the second transparent conductive layer.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura and Kim '008 in view of Kim et al. (U.S. Patent No. 6,693,689, hereinafter "Kim '689").

Nakamura and Kim '008 disclose the LCD device as recited above, however, the references fail to specifically disclose a dielectric layer having a color filter.

Kim '689 discloses an LCD device having a dielectric layer having a color filter (fig. 12, ref. 117).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a dielectric layer having a color filter since one would be motivated to improve color purity and improve the contrast ratio as well as the viewing angle (col. 8, lines 5-15).

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura and Kim '008 in view of Kubo et al. (U.S. Patent No. 6,819,379, hereinafter "Kubo").

Nakamura and Kim '008 disclose the LCD device as recited above, however, the references fail to specifically disclose a phase compensation plate and polarizer on the second substrate panel opposite the side of the liquid crystal layer.

Kubo discloses an LCD device having a phase compensation plate (fig. 1, ref. 7) and polarizer (fig. 1, ref. 6) on the second substrate panel opposite the side of the liquid crystal layer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a phase compensation plate and polarizer on the second substrate panel opposite the side of the liquid crystal layer since one would be motivated to provide a satisfactory display with sufficiently high contrast (col. 5, lines 44-49) by minimizing the problems with an unsatisfactory black display and brightness (col. 1, line 62 – col. 2, line 10).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 571-272-2304. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gw
November 26, 2004

TARIFUR R. CHOWDHURY
PRIMARY EXAMINER